

Listing of Claims

1-17 (canceled)

18. (currently amended) A nucleic acid encoding ~~an isolate~~ a modified GPCR or biologically active fragment thereof comprising a DRY motif modified to contain an amino acid other than arginine at position 2, wherein the modified GPCR or biologically active fragment thereof is constitutively desensitized in the absence of an agonist of claim 1.

19. (original) A nucleic acid selected from the group consisting of SEQ ID NOs: 7-12.

20. (original) A nucleic acid encoding a polypeptide selected from the group consisting of SEQ ID NOs.: 1-6.

21. (original) A vector comprising a nucleic acid of claim 19.

22. (original) A host cell comprising the expression vector of claim 21.

23 – 47. (canceled)

48. (original) A method of detecting a nucleic acid of claim 19 in a biological sample comprising

- (a) exposing the biological sample to a modified GPCR probe; and
- (b) determining whether the modified GPCR probe bound the nucleic acid of the biological sample.

49. (original) A composition comprising a substrate and one or more nucleic acids of claim 19 or fragments thereof which encode a motif of formula I, wherein the formula I is a modified DRY motif.

50 – 55. (canceled)

56. (new) The nucleic acid of claim 18, wherein said nucleic acid is at least 80% identical to a nucleic acid selected from the group consisting of SEQ ID NOs: 7-12.

57. (new) The nucleic acid of claim 56, wherein said nucleic acid is at least 90% identical to a nucleic acid selected from the group consisting of SEQ ID NOs: 7-12.

58. (new) The nucleic acid of claim 56, wherein said nucleic acid is at least 95% identical to a nucleic acid selected from the group consisting of SEQ ID NOs: 7-12.

59. (new) The nucleic acid of claim 56, wherein said nucleic acid is at least 98% identical to a nucleic acid selected from the group consisting of SEQ ID NOs: 7-12.

60. (new) The nucleic acid of claim 56, wherein said nucleic acid is at least 99% identical to a nucleic acid selected from the group consisting of SEQ ID NOs: 7-12.